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- (54) **MULTI-SPIN ROTATING WHEEL BONUS FOR VIDEO SLOT MACHINE**
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- (51) Int. Cl.⁷ A63F 13/00
- (52) U.S. Cl. 463/20; 463/16
- (58) Field of Search 463/13-20, 9-12, 463/1, 25; 273/138.1

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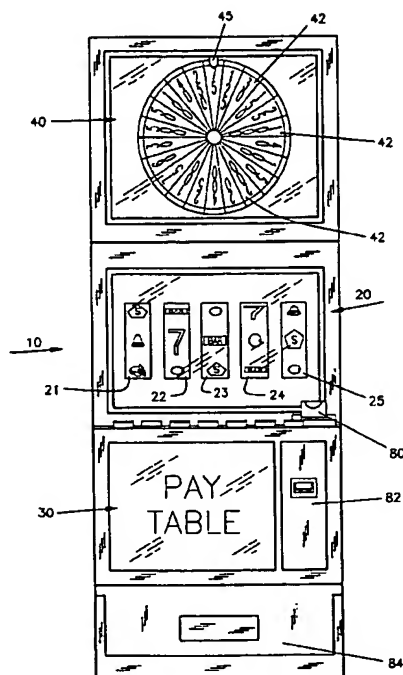
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(57) ABSTRACT

A slot machine is configured to have a main game comprising a multi-reel payline mechanical reel or video reel slot arrangement with at least five reels and five or more paylines and a secondary event game comprising a rotating wheel bonus game. Whenever the player achieves a combination of symbols on the main game that awards the player with the secondary event game, the number of spins provided to the player to play the secondary event rotating wheel game is based on the number of paylines that the player has played on the main game or by the number of credits wagered on each payline. Alternatively, the number of spins awarded to the player on the secondary event game can be determined by the symbol combinations achieved by the player on the main game. All spins of the rotating wheel bonus game are winning spins.

21 Claims, 2 Drawing Sheets



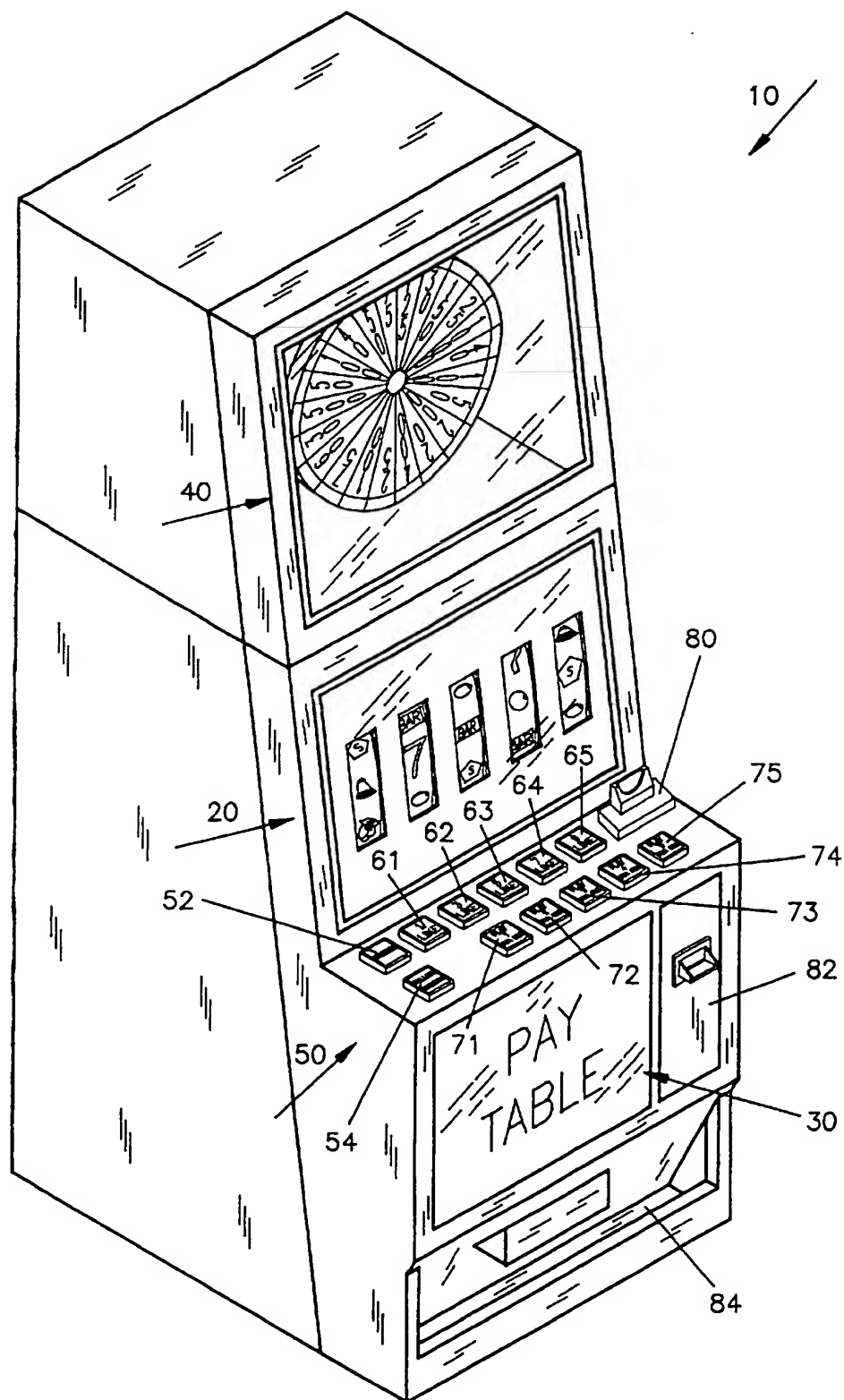
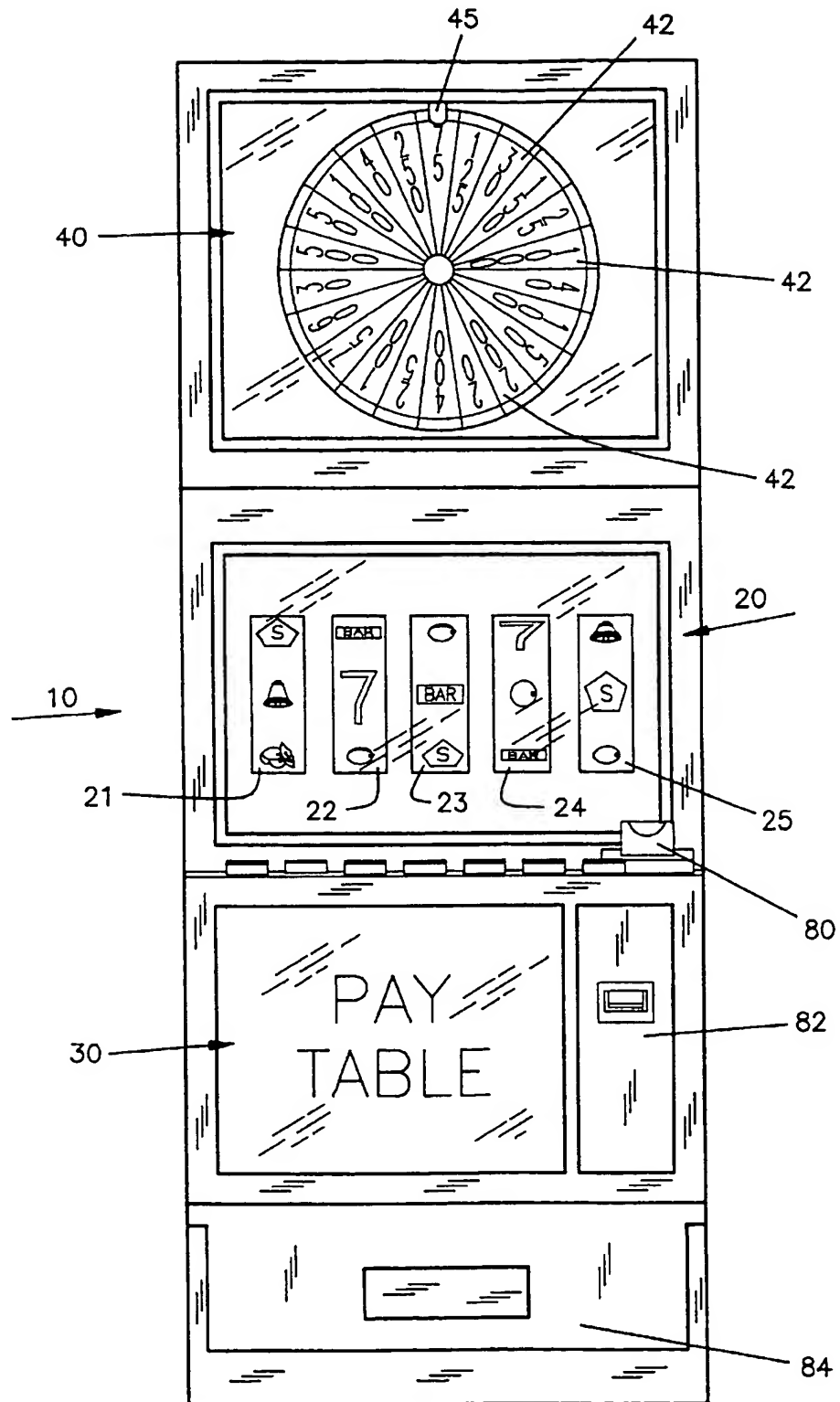


FIG-1



MULTI-SPIN ROTATING WHEEL BONUS FOR VIDEO SLOT MACHINE

CROSS REFERENCE TO RELATED APPLICATION

This application is a Continuation-in-Part of application Ser. No. 09/112,225, filed Jul. 8, 1998, now U.S. Pat. No. 6,186,894, entitled "Reel Slot Machine".

This invention relates to a mechanical reel or video reel slot machine, and more particularly to a mechanical reel or video reel slot machine that has a main five reel game with five or more paylines and a secondary event rotating wheel bonus game which the player may have the opportunity to spin multiple times.

BACKGROUND OF THE INVENTION

Reel slot machines have been used in gaming establishments for more than one hundred years. The traditional reel slot machine has three mechanical reels that rotate around a common horizontal axis. A reel strip is attached around the circumference of each slot reel and the reel strip contains a plurality of symbols thereon. As each reel comes to a stop, a symbol on the perimeter of the reel strip is displayed on a horizontal pay line on the face of the gaming machine. If the symbols that align on the payline match one of the preselected winning combinations, the player is a winner.

From the traditional three reel, single payline slot machine, newer slot machine concepts have evolved. Slot machines have been developed that have multiple paylines—such as additional horizontal paylines, diagonal paylines and even V-shaped paylines. The number of reels have been increased beyond the basic three reel slot machines; four reels, five reels and more have been used up to the classic Big Bertha slot machine that has ten reels.

Besides using mechanical reels, slot machines have been developed that use video representations of spinning reels. However, video reel slot machines have not been as successful as the mechanical spinning reel slot machines because the players feel that their chances of winning are lower on video slot machines. On a mechanical spinning reel slot machine, a player has a feel for the number of symbols that are located on the reel strip which is mounted around the circumference of the spinning wheel and therefore the player perceives that he knows the odds of each symbol appearing on a payline. In a video slot machine, the player has no way of perceiving how many symbols are possible to appear in each window behind the payline. Therefore, the player perception is that he is receiving a better opportunity of winning on a mechanical spinning reel slot machine.

One of the more popular video reel slot machines in the world that has been created is a five reel, nine payline slot machine. These slot machines are known as "Australian" style slot machines since their genesis appears to have been in Australia. When the video representation of the reels stop spinning, fifteen symbols are displayed to the player disposed in three horizontal rows and five vertical columns. On this three-by-five matrix formed by the three rows and five columns of symbols that are shown, nine separate paylines are provided.

Payline #1 is the center horizontal row as shown:

X	X	X	X	X
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Payline #2 is the top horizontal row as shown:

X	X	X	X	X
---	---	---	---	---

Payline #3 is the bottom horizontal row as shown:

X	X	X	X	X
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Payline #4 is the V-shaped configuration as shown:

X				X
	X		X	
		X		

Payline #5 is an inverted V-shaped configuration as shown:

		X		
X		X	X	X

Payline #6 is a W-shaped configuration as shown:

X		X		X
	X		X	

Payline #7 is an inverted W-shaped configuration as shown:

X	X		X	
		X		X

Payline #8 is another inverted W-shaped configuration as shown:

X	X		X	
		X		X

Payline #9 is another W-shaped configuration as shown:

X		X		X
	X		X	

These nine payline configurations are merely representative of any of a myriad of payline configurations that can be used, and the number of paylines can be more or less than nine paylines.

Each coin, token or credit wagered by the player activates in sequential order the paylines. The player must wager nine

coins to activate all nine paylines with one coin on each line. A maximum of five credits is usually allowed (although other gaming machines of this type can have a maximum number of credits less than five or more than five up to as many as twenty per payline) on each payline so the maximum wager by the player would be forty-five credits.

For example, there is in use in Australia a video reel slot machine that has twenty paylines and allows up to twenty coins, tokens or credits to be wagered on each payline.

A plethora of winning symbol combinations are provided so that the player has a large number of various opportunities to win depending on which symbols are displayed in which locations on the reels when the reels stop spinning.

In order to improve the player appeal of mechanical spinning reel slot machines, a recent development has been what are known as secondary event slot machines. In secondary event gaming machines, the player first plays a main game. If a preselected event occurs during the play of the main game, the player is provided with a secondary event which allows the player an opportunity to win a bonus payout.

One of the first secondary event games that was created for the slot machine market is a game known as the "WHEEL OF FORTUNE" based on the television game show of the same name. When the third reel of the slot machine displayed a "Spin" symbol on the payline, the secondary event was represented by a replica spinning wheel. The player would press a special "Spin" button on the button panel of the gaming to activate the replica spinning wheel to rotate. When the replica spinning wheel came to rest after a few seconds, the player would win the amount shown in the arcuate segment demarcated by an indicator. The winning segment was randomly determined by the electronics of the game. The player could win as many as one thousand coins during this secondary event phase of the game.

The popularity of "WHEEL OF FORTUNE" spawned other secondary event games. Currently a very popular secondary event game is the video reel slot machine known as "REEL 'EM IN" which is an Australian style five reel, nine payline video slot machine that provides the player with a secondary event if certain preselected winning combinations are achieved on the paylines. In this game, which has a fishing theme, if the player achieves a secondary event opportunity, the first video screen display is replaced by a second video screen display which shows five fisherman sitting in boats. The player selects a fisherman and video animation shows the fisherman reeling in a fish. The size of the fish caught determines the multiplier applied to the amount of the player's wager which is how the secondary event payout is determined.

The "REEL 'EM IN" game has the drawback of being entirely a video reel slot machine. In a video reel slot machine, a player cannot physically analyze the size of the reel strip and the player cannot physically estimate the number of symbols on each reel strip. Therefore, many reel slot machine players are uncomfortable playing video reel slot machines since the player has absolutely no feel for the odds on this type of machine.

Also none of the current secondary event games that are available offer the player more than one opportunity in the secondary event phase of the game. Whenever a player achieves a secondary event, the player is provided with only one chance at the secondary event.

It is an object of the present invention to provide a gaming slot machine in which the main game has at least five reels and five or more paylines and the secondary event game is a rotating wheel arrangement and the player is provided with multiple chances to spin the rotating wheel of the secondary event game.

It is a feature of the present invention to provide, in the preferred embodiment, a slot machine with five mechanical or video reels and nine paylines which also includes a secondary event feature. The secondary event feature, in the preferred embodiment, is a rotating wheel bonus game in which each spin of the rotating wheel is a winning spin. The player is also given multiple chances at the secondary event with the number of chances based on the number of paylines that have been activated by the player prior to the spin of the reels in the main game; or the number of coins, tokens or credits that have been wagered by the player at the beginning of the main game; or by the symbol combinations achieved by the player on the active pay lines of the main game.

It is an advantage of the present invention that the player will be encouraged to play more paylines and wager more coins, tokens or credits in the main game since the player will receive multiple chances at the secondary event feature based on the number of paylines or coins, tokens or credits played by the player or the symbol combinations achieved by the player on any active pay lines on the main game.

Other objects, features and advantages of the present invention will become apparent from a consideration of the following detailed description.

SUMMARY OF THE INVENTION

A slot machine is configured to have a main game comprising a multi-reel payline mechanical reel or video reel slot arrangement with at least five reels and five or more paylines and a secondary event game comprising a rotating wheel bonus game. Whenever the player achieves a combination of symbols on the main game that awards the player with the secondary event game, the number of spins provided to the player to play the secondary event rotating wheel game is based on the number of paylines that the player has played on the main game or by the number of credits wagered on each payline. Alternatively, the number of spins awarded to the player on the secondary event game can be determined by the symbol combinations achieved by the player on the main game. All spins of the rotating wheel bonus game are winning spins.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows an isometric view of a slot machine of the present invention.

FIG. 2 shows a front view of the slot machine of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention comprises a gaming machine having a first set of either mechanical reels or video reels that are used as the main game played by the player and a rotating wheel bonus game that is used as the secondary event game played by the player.

FIGS. 1 and 2 show the gaming machine generally at 10. The gaming machine 10 is a conventional cabinet configuration with a first set of slot reels 20 which are preferably located in generally the center section of the gaming machine cabinet. A rotating wheel bonus game 40 is located in generally the upper section of the gaming machine cabinet. Also, at any appropriate location on the gaming machine 10, such as the belly glass, there is provided a pay table 30 which shows the various winning combinations that the player is attempting to achieve on the main game.

Additional components of the gaming machine 10 are such conventional items as a button panel 50 upon which are located the buttons used by the player to operate the gaming machine, such as a "Cash Out" button 52, and a "Spin" button 54.

Also mounted on the button panel 50 are the buttons used by the player to select which paylines are to be active in the main game and the number of credits that are to be wagered on each active payline. In the preferred embodiment of the present invention, there are provided, on the same row as the "Cash Out" button 52, five payline selection buttons that are used to select the active paylines: the "One Payline" button 61, the "Three Payline" button 62, the "Five Payline" button 63, the "Seven Payline" button 64, and the "Nine Payline" button 65. Thus, in this configuration, the player can select to have active from among one, three, five, seven or nine paylines. Other payline selection configurations can be used to allow the player to select other combinations or any or all of the paylines to be active.

Again, in the preferred embodiment of the present invention, just below the payline selection buttons on the button panel 50, there are provided five wager selection buttons to allow the player to select the number of credits to be wagered on each payline: the "Bet One" button 71, the "Bet Two" button 72, the "Bet Three" button 73, the "Bet Four" button 74, and the "Bet Five" button 75. Thus, in this configuration, the player can select from between one and five credits to be wagered on each active payline. Other wager selection configurations can be used to allow the player to select the number of credits to be wagered on each active payline.

Other conventional components are the coin head 80, the bill acceptor 82 and the payout tray 84. The interior of the gaming machine 10 contains the electronic controls that are used to operate the gaming machine which are also conventional.

In one of the preferred embodiments of the present invention, the main slot reels 20 comprise a five reel configuration with each of the reels 21, 22, 23, 24 and 25 located adjacent to each other and mounted to spin horizontally around a common axis. Each reel has mounted around its circumference a reel strip which contains various symbols that are visible to the player as the reel spins. When the reels stop spinning, three rows of symbols are visible to the player resulting in a three-by-five matrix of symbols being displayed.

In another preferred embodiment of the present invention, the main slot reels 20 could be a video display representation of spinning slot reels using the conventional technology that is used in video reel slot machines. This video reel representation would display a five reel configuration with each reel 21, 22, 23, 24 and 25 displayed adjacent to each other on a video display screen. Each reel would appear to spin around a horizontal axis and each reel appears to have a reel strip which contains various symbols that are visible to the player as the reel spins. When the reels stop spinning, three rows of symbols are displayed to the player on a video screen resulting in a three-by-five matrix of symbols being displayed.

In accordance with the preferred embodiment of the present invention, nine paylines are provided. Any suitable combination of symbol positions can be utilized as paylines; however, in the preferred embodiment of the present invention, the nine paylines that are used in "Australian" style slot machines as described above are used since players have become familiar with this type of nine line payline configuration. Alternatively, other multi-reel mechanical or video reel configurations having one or more paylines can be used for the main game slot reels 20.

The secondary event bonus game 40 comprises a rotating wheel display which can either be a mechanical wheel or a video representation of a rotating wheel. The rotating wheel 40 is divided into a plurality of arcuate segments 42, with each segment having a number thereon representing a payout amount to be won by the player. A single payline

indicator 45 is provided at any suitable location around the circumference of the rotating wheel 40 such as at the top of the rotating wheel 40 as shown in FIGS. 1 and 2.

The method of the present invention as practiced on the gaming machine 10 of the present invention is as follows:

A player inserts coins or tokens into the coin head 80 or paper currency into the bill acceptor 82. The amount inserted is accrued on a credit meter (not shown) which is conventional and which shows the number of accrued credits that the player has available to wager when playing the gaming machine. By pressing one of the payline selection buttons 61, 62, 63, 64 or 65, the player selects the number of paylines to be active during that play of the game. The player then selects one of the wager selection buttons 71, 72, 73, 74 or 75 to determine the number of credits to be wagered on each of the paylines that the player has activated for the upcoming spin of the reels.

Once the player has completed his wagering, the "Spin" button 54 (or alternatively a conventional pull handle) is activated and all five reels 21, 22, 23, 24 and 25 of the main game 20 commence to spin. Each reel eventually comes to a stop and symbols are displayed in each of the locations of the three-by-five matrix displayed to the player. Certain symbol combinations have been preselected as winning combinations and are shown to the player in the pay table 30. If the player achieves a winning combination of symbols on any of the paylines, then the player wins. Any suitable pay table 49 be used. An example of a representative pay table is shown in Table 1.

TABLE 1

WINNING COMBINATIONS					PAYOUT
A	A	A	A	A	5000
A	A	A	A	XX	1000
A	A	A	XX	—	150
A	A	XX	—	—	10
B	B	B	B	B	500
B	B	B	B	XX	75
B	B	B	XX	—	10
B	B	XX	—	—	2
C	C	C	C	C	500
C	C	C	C	XX	75
C	C	C	XX	—	10
C	C	XX	—	—	2
D	D	D	D	D	200
D	D	D	D	XX	50
D	D	D	XX	—	5
E	E	E	E	E	100
E	E	E	E	XX	25
E	E	E	XX	—	5
F	F	F	F	F	100
F	F	F	F	XX	25
F	F	F	XX	—	5
G	G	G	G	G	100
G	G	G	G	XX	25
G	G	G	XX	—	2
H	H	H	H	H	100
H	H	H	H	XX	25
H	H	H	XX	—	2
I	I	I	I	I	100
I	I	I	I	XX	25
I	I	I	XX	—	2

With regard to Table 1, the letters A, B, C, D, E, F, G, H and I represent suitable symbols that can be used on the reel strips 21, 22, 23, 24 and 25. For example, the conventional fruit symbols could be used or, alternatively, a group of symbols representing a common theme could be used. The letters XX represent any symbol except the associated letter symbol in that line. The mark "—" represents any symbol including the associated letter symbol in that line.

If the player achieves any of the symbol combinations shown in Table 1 on any active payline, then the player is

paid the payout amount for that symbol combination shown in the pay table multiplied by the number of credits wagered on that active payline. The payout is typically made by accruing credits on a credit meter which is provided in any suitable location on the gaming machine. The player then uses the credits accrued on the credit meter to make additional wagers on the gaming machine. Alternatively, any amounts won by the player can be paid from a coin hopper mounted on the interior of the gaming machine directly into the payout tray 84. When the player has completed his play of the gaming machine, the player collects his accrued credits by pressing the "Cash Out" button 52 and the coin hopper then dispenses coins into the payout tray 84 to pay the player. Alternatively, other conventional payout mechanisms, such as a ticket printer, can be used.

Additionally, there is provided another pay table which shows the winning symbol combinations on the main game that earn the player an opportunity to play the secondary event feature of the game which, in the present invention, is the secondary event rotating wheel bonus game 40. The winning symbols that must be displayed on the main slot reels 21, 22, 23, 24 and 25 in order to earn the player the opportunity to play the secondary event can be any suitable symbol combination which has been preselected. Table 2 shows a representative pay table that shows the winning symbols that earn the player the opportunity to play the secondary event:

TABLE 2

WINNING COMBINATIONS					PAYOUT
BS	XX	BS	XX	BS	SPIN
BS	XX	BS	XX	XX	SPIN
BS	XX	XX	XX	BS	SPIN
XX	XX	BS	XX	BS	SPIN

With regard to Table 2, the letters BS represent a suitable bonus symbol that can be used on the reel strips 21, 22, 23, 24 and 25 and indicate to the player that this symbol relates to the secondary event feature. The letters XX represent any symbol but the associated letter symbol in that line.

In the preferred embodiment of the present invention, if the player achieves one of the winning combinations shown in Table 2 and earns the opportunity to play the secondary event feature, the number of plays on the secondary event feature is equal to the number of paylines that the player has activated on the main reels 20. For example, if the player has played all nine paylines on the main reels 20 and achieves a winning combination shown in Table 2, then the player will win nine spins on the secondary event rotating wheels 40.

Alternatively, the number of spins on the secondary event game can be determined by the number of credits wagered by the player on the paylines. For example, if the player has wagered five credits on each payline, the player would win five spins on the secondary event rotating wheels 40.

Another alternative variation that can be used has the number of spins on the secondary event game determined by the symbol combination achieved on the reels of the main game. In this variation of the present invention, the player would always be awarded at least two spins on the secondary event game for a winning combination on the main game. For example, if the player would achieve three cherries on an active payline, the number of bonus spins on the secondary reel could be three spins; three oranges could yield five spins; and three 7's could yield ten spins. Any suitable symbol combinations could be used as well as any suitable number of bonus spins on the secondary event rotating wheels.

Each spin of the secondary event rotating wheel bonus game 40 will be a winning spin. Any suitable monetary distribution of payout amounts can be used for the payouts on the secondary event rotating wheel bonus game 40. A preferred distribution on the rotating wheel bonus game 40 is shown in FIGS. 1 and 2.

Therefore, using the monetary distribution shown in FIGS. 1 and 2, the player will win a minimum of twenty-five credits and a maximum of one thousand credits on each spin of the secondary event rotating wheel 40. The number of spins awarded to the player in one example would be the number of paylines that the player had active on the main reels 20 when the player won the bonus spins. If the player had activated all nine lines on the main reels 20 when the player won the opportunity to go to the secondary event rotating wheels 40, the player would win nine spins on the secondary event rotating wheels 40 and would win no less than two hundred twenty-five credits and could possibly win nine thousand credits.

One variation that can be made to the present invention is to include a "Mystery Multiplier" feature as part of the secondary event game. A suitable display can be added to the gaming machine, e.g. an LED or similar display board that will display multiplier numbers. At randomly selected times during the play of the secondary event game, a number is randomly selected and that number is used as a multiplier for any winning combinations achieved by the player during the spins occurring during the secondary event game.

In the preferred embodiment, the multiplier number is an integer selected from the group of integers 2, 3, 4, 5, 6 and 10. The probability of any particular integer being the selected integer is weighted so that the overall average mystery multiplier is three times the winning amount. Alternatively any suitable group of multiplier integers can be used and the probability can be weighted to be any suitable average multiplier amount.

While the invention has been illustrated with respect to several specific embodiments thereof, these embodiments should be considered as illustrative rather than limiting. Various modifications and additions may be made and will be apparent to those skilled in the art. Accordingly, the invention should not be limited by the foregoing description, but rather should be defined only by the following claims.

What is claimed is:

1. A method of playing a gaming machine having a main slot machine with at least five reels and five or more paylines and a secondary event rotating wheel bonus game with a rotating wheel having a plurality of payout segments, each payout segment having a payout amount associated therewith, comprising:

- making a wager of at least one credit on at least one of the paylines on the main slot machine;
- activating the main slot machine to cause the reels to spin;
- when the reels stop spinning, determining which symbols appear on the paylines upon which a wager has been made;
- awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;
- determining a number of bonus spins of the rotating wheel by the number of paylines activated on the main slot machine and awarding the determined number of bonus spins of the rotating wheel if a preselected secondary event bonus combination is achieved on one of the pay lines of the main slot machine;
- determining which payout segment of the rotating wheel appears on a payline of the rotating wheel; and

- g) on each bonus spin of the rotating wheel, awarding a payout to the player corresponding to the payout segment appearing on the pay line of the rotating wheel.
2. The method of claim 1 in which the main slot machine is provided with five reels and nine paylines.
3. The method of claim 1 in which a multiplier number is randomly selected at randomly determined intervals during the play of the secondary event rotating wheel bonus game and the multiplier number is used to increase the amount of payouts achieved during the play of the secondary event game.
4. A method of playing a gaming machine having a main slot machine with at least five reels and five or more paylines and a secondary event rotating wheel bonus game with a rotating wheel having a plurality of payout segments, each payout segment having a payout amount associated therewith, comprising:
- a) making a wager of at least one credit on at least one of the paylines on the main slot machine;
 - b) activating the main slot machine to cause the reels to spin;
 - c) when the reels stop spinning, determining which symbols appear on the paylines upon which a wager has been made;
 - d) awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;
 - e) determining a number of bonus spins of the rotating wheel by the number of credits wagered on a payline and awarding the determined number of bonus spins of the rotating wheel if a preselected secondary event bonus combination is achieved on one of the pay lines of the main slot machine;
 - f) determining which payout segment of the rotating wheel appears on a payline of the rotating wheel; and
 - g) on each bonus spin of the rotating wheel, awarding a payout to the player corresponding to the payout segment appearing on the pay line of the rotating wheel.
5. The method of claim 4 in which the main slot machine is provided with five reels and nine paylines.
6. The method of claim 4 in which a multiplier number is randomly selected at randomly determined intervals during the play of the secondary event rotating wheel bonus game and the multiplier number is used to increase the amount of payouts achieved during the play of the secondary event rotating wheel bonus game.
7. A method of playing a gaming machine having a main slot machine with at least five reels and five or more paylines and a secondary event rotating wheel bonus game, the rotating wheel having a plurality of payout segments, each payout segment having a payout amount associated therewith, comprising:
- a) making a wager of at least one credit on at least one of the paylines on the main slot machine;
 - b) activating the main slot machine to cause the reels to spin;
 - c) when the reels stop spinning, determining which symbols appear on the paylines upon which a wager has been made;
 - d) awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;
 - e) if a preselected rotating wheel bonus game combination is achieved on at least one of the pay lines of the main slot machine; awarding two or more spins of the rotating wheel bonus game based on which preselected

- rotating wheel bonus game combination appears on a payline of the main slot machine;
- f) determining which payout segment of the rotating wheel appears on a payline of the rotating wheel; and
- g) on each bonus spin of the rotating wheel, awarding a payout to the player corresponding to the payout segment appearing on the pay line of the rotating wheel.
8. The method of claim 7 in which the main slot machine is provided with five reels and nine paylines.
9. The method of claim 7 in which a multiplier number is randomly selected at randomly determined intervals during the play of the secondary event game and the multiplier number is used to increase the amount of payouts achieved during the play of the secondary event game.
10. A gaming machine having a main slot machine with at least five reels and five or more paylines and a secondary event rotating wheel bonus game with a rotating wheel having a plurality of payout segments, each payout segment having a payout amount associated therewith, and including computer controls to operate the gaming machine, comprising:
- a) means for wagering at least one credit on at least one of the paylines on the main slot machine;
 - b) means for activating the main slot machine to cause the reels to spin;
 - c) means for determining after the reels stop spinning which symbols appear on the paylines upon which a wager has been made;
 - d) means for awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;
 - e) means for determining the number of paylines activated on the main slot machine and means for awarding a spin of the secondary event rotating wheel bonus game for each pay line activated on the main slot machine game if a preselected secondary event bonus combination is achieved;
 - f) means for determining which payout segment of the rotating wheel appears on the pay line of the rotating wheel; and
 - g) means for awarding a payout on each spin of the rotating wheel corresponding to the payout segment appearing on the pay line of the rotating wheel.
11. The gaming machine of claim 10 in which the main slot machine is provided with five reels and nine paylines.
12. The gaming machine of claim 10 further including means for randomly selecting a multiplier number at randomly determined intervals during the play of the secondary event rotating wheel bonus game and means for increasing the amount of payouts achieved during the play of the secondary event rotating wheel bonus game by the amount of the multiplier number.
13. A gaming machine having a main slot machine with at least five reels and five or more paylines and a secondary event rotating wheel bonus game with a rotating wheel having a plurality of payout segments, each payout segment having a payout amount associated therewith, and including computer controls to operate the gaming machine, comprising:
- a) means for wagering at least one credit on at least one of the paylines on the main slot machine;
 - b) means for activating the main slot machine to cause the reels to spin;
 - c) means for determining after the reels stop spinning which symbols appear on the paylines upon which a wager has been made;
 - d) means for awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;

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e) means for determining the number of credits wagered on the main slot machine and means for awarding a spin of the secondary event rotating wheel bonus for each credit wagered on the main slot machine game if a preselected secondary event bonus combination is achieved;

f) means for determining which payout segment of the rotating wheel appears on the pay line of the rotating wheel; and

g) means for awarding a payout on each spin of the rotating wheel corresponding to the payout segment appearing on the pay line of the rotating wheel.

14. The gaming machine of claim 13 in which the main slot machine is provided with five reels and nine paylines.

15. The gaming machine of claim 13 further including means for randomly selecting a multiplier number at randomly determined intervals during the play of the secondary event rotating wheel bonus game and means for increasing the amount of payouts achieved during the play of the secondary event rotating wheel bonus game by the amount of the multiplier number.

16. A gaming machine having a main slot machine with at least five reels and five or more paylines and a secondary event rotating wheel bonus game, the rotating wheel having a plurality of payout segments, each payout segment having a payout amount associated therewith, and including computer controls to operate the gaming machine, comprising:

a) means for wagering at least one credit on at least one of the paylines on the main slot machine;

b) means for activating the main slot machine to cause the reels to spin;

c) means for determining after the reels stop spinning which symbols appear on the paylines upon which a wager has been made;

d) means for awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;

e) if a preselected rotating wheel bonus game combination is achieved on at least one of the pay lines of the main slot machine, means for awarding two or more spins of the rotating wheel bonus game based on which preselected rotating wheel bonus game combination appears on a payline on the main slot machine; and

f) means for determining which payout segment of the rotating wheel appears on the pay line of the rotating wheel; and

g) means for awarding a payout on each spin of the rotating wheel corresponding to the payout segment appearing on the pay line of the rotating wheel.

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17. The gaming machine of claim 16 in which the main slot machine is provided with five reels and nine paylines.

18. The gaming machine of claim 16 further including means for randomly selecting a multiplier number at randomly determined intervals during the play of the secondary event game and means for increasing the amount of payouts achieved during the play of the secondary event game by the amount of the multiplier number.

19. A gaming machine having a main slot machine with multiple reels and at least one payline and a secondary event slot machine with at least one reel and at least one payline, each reel having a plurality of symbols thereon, and including computer controls to operate the gaming machine, comprising:

a) means for wagering at least one credit on at least one of the paylines on the main slot machine;

b) means for activating the main slot machine to cause the reels to spin;

c) after the reels stop spinning, means for determining which symbols appear on each of the paylines upon which a wager has been made;

d) means for awarding a payout if one or more of preselected winning combinations appear on any of the paylines on which a wager has been made;

e) if a preselected secondary event bonus combination is achieved on at least one of the paylines of the main slot machine, means for awarding two or more spins on the secondary event slot machine based on the symbol combinations achieved on the main slot machine;

f) means for determining which symbol combination appears on any payline of the secondary event slot machine; and

g) means for awarding a payout on each spin of the secondary event slot machine in which a winning symbol combination is achieved on a payline of the secondary event slot machine.

20. The gaming machine of claim 19 in which the main slot machine is provided with five reels and nine paylines and the secondary event slot machine is provided with three reels and one payline.

21. The gaming machine of claim 19 further including means for randomly selecting a multiplier number at randomly determined intervals during the play of the secondary event game and means for increasing the amount of payouts achieved during the play of the secondary event game by the amount of the multiplier number.

* * * * *



US006517432B1

(12) **United States Patent**
Jaffe(10) Patent No.: **US 6,517,432 B1**(45) Date of Patent: ***Feb. 11, 2003**(54) **GAMING MACHINE WITH MOVING
SYMBOLS ON SYMBOL ARRAY**(75) Inventor: **Joel R. Jaffe, Evanston, IL (US)**(73) Assignee: **WMS Gaming Inc., Chicago, IL (US)**(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.This patent is subject to a terminal dis-
claimer.(21) Appl. No.: **09/531,712**(22) Filed: **Mar. 21, 2000**(51) Int. Cl.⁷ **A63F 9/24**(52) U.S. Cl. **463/16; 463/20**(58) Field of Search **463/1, 10, 11,
463/12, 13, 17, 16, 18, 19, 20, 22, 25-27,
30, 31**(56) **References Cited****U.S. PATENT DOCUMENTS**

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(74) Attorney, Agent, or Firm—Jenkins & Gilchrist

(57) **ABSTRACT**

A gaming machine comprises a visual display and a bonus feature of a wagering game. The visual display shows an array of symbols in visual association with at least one pay line. The array includes a special symbol and a stop-game symbol. The game feature includes a plurality of rounds. During each round, the special symbol and the stop-game symbol randomly move to and stop at new respective positions on the array. The game feature awards a payout if the symbols along the pay line correspond to a winning game outcome. The game feature ends when the special symbol and the stop-game symbol land on the same position.

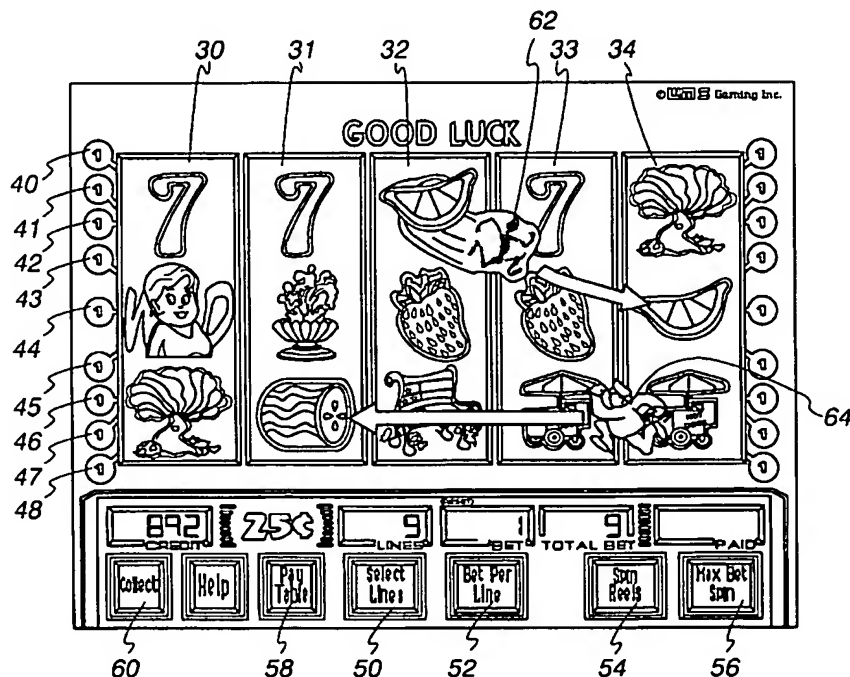
38 Claims, 7 Drawing Sheets

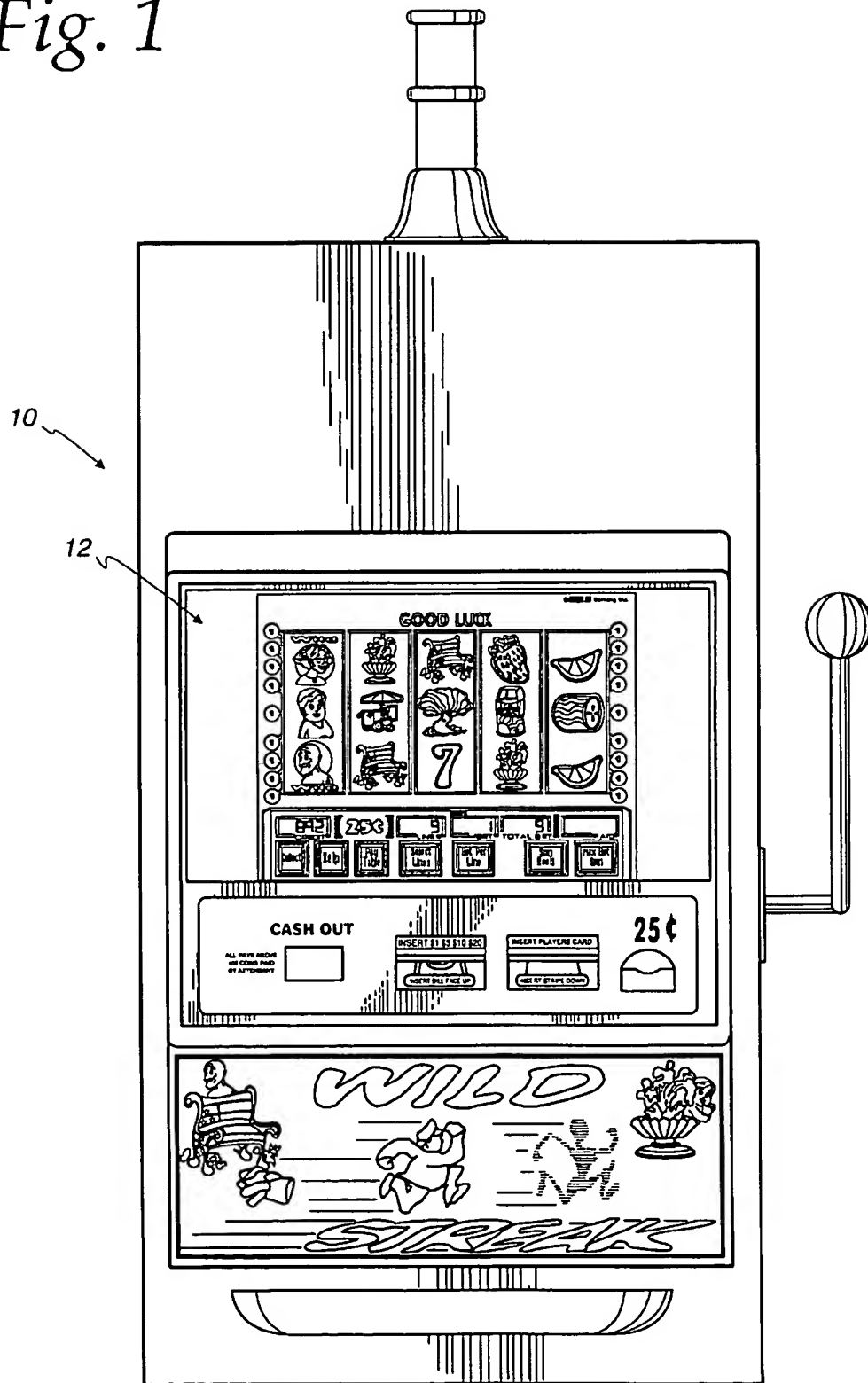
Fig. 1

Fig. 2

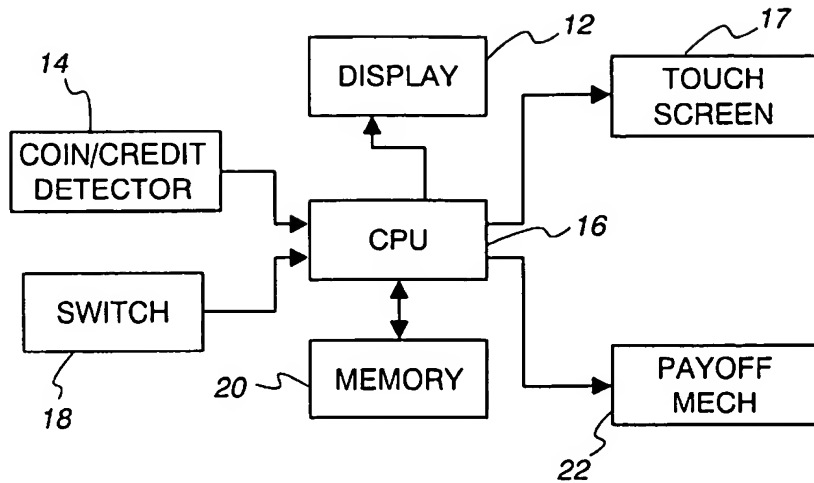


Fig. 3

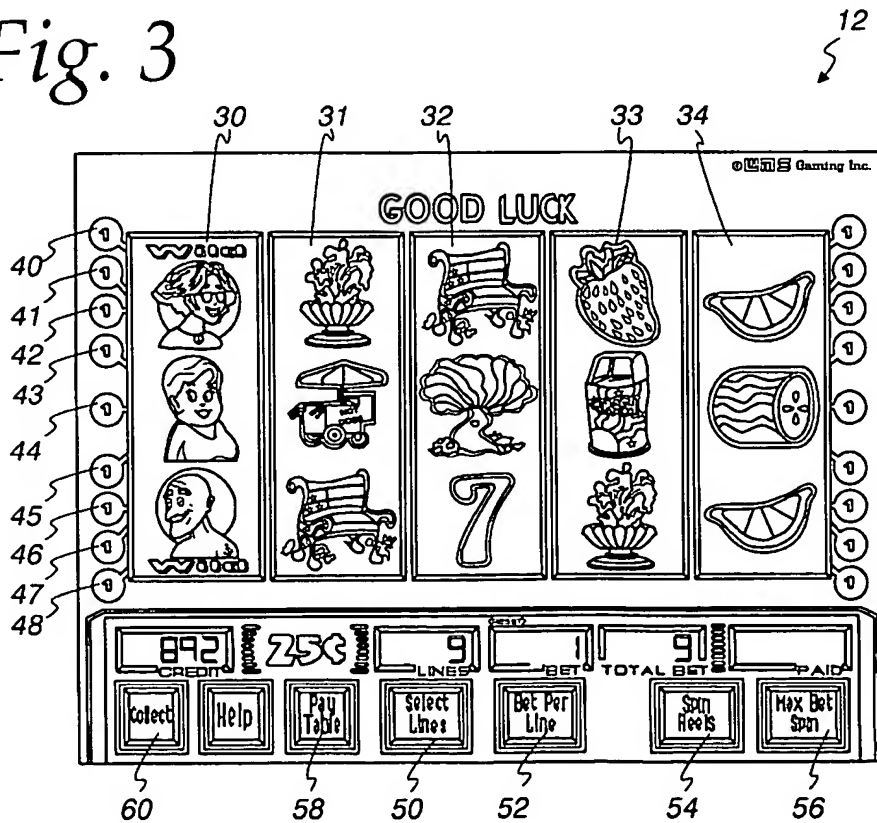


Fig. 4

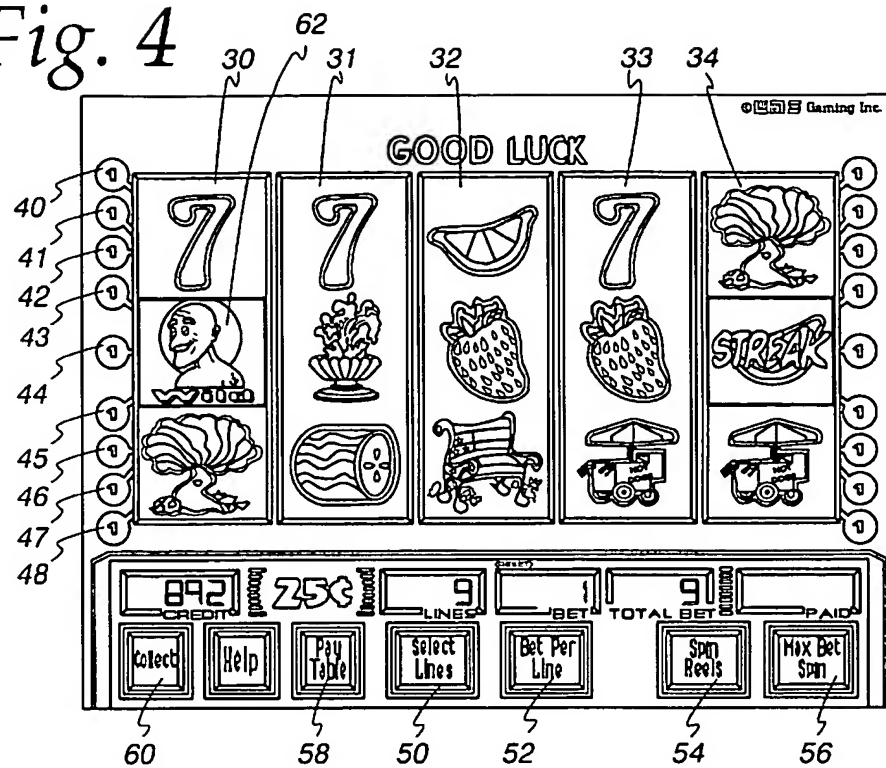


Fig. 5

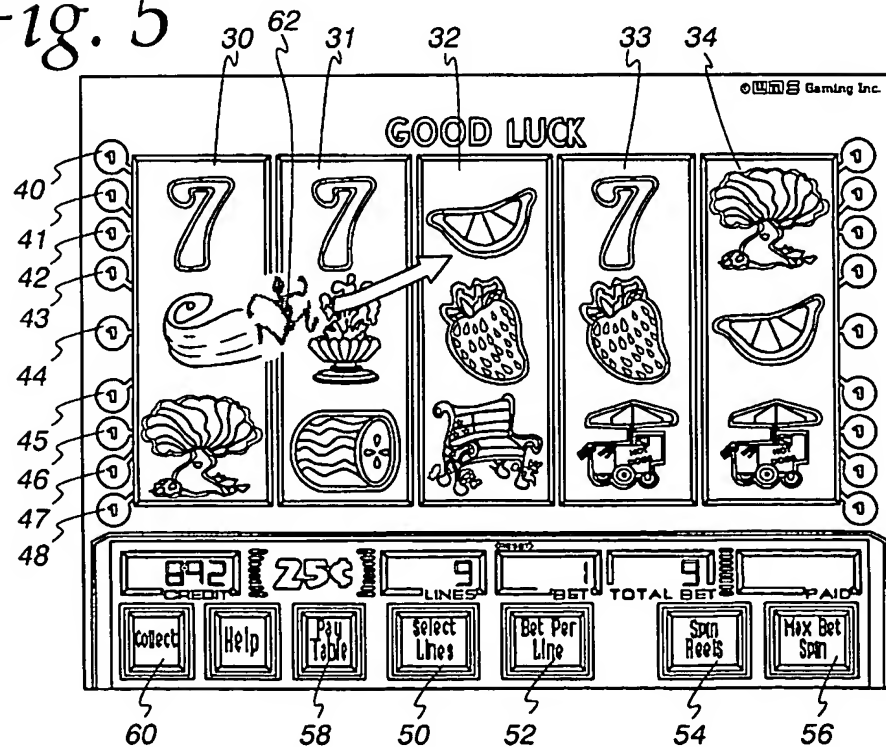


Fig. 6

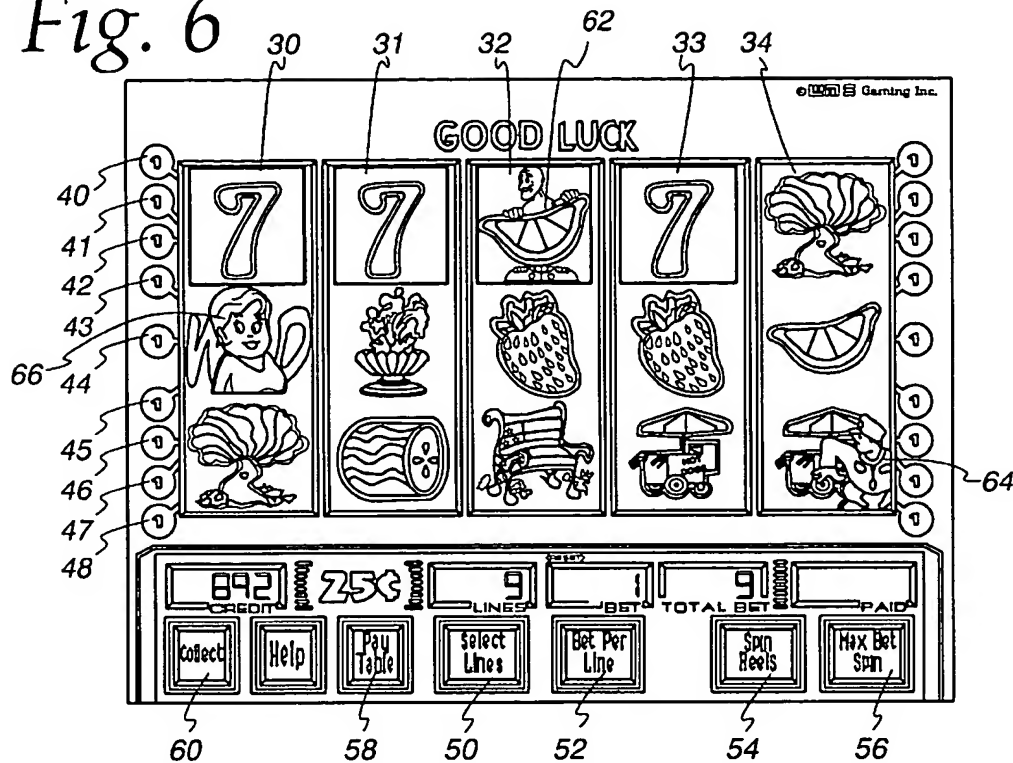


Fig. 7

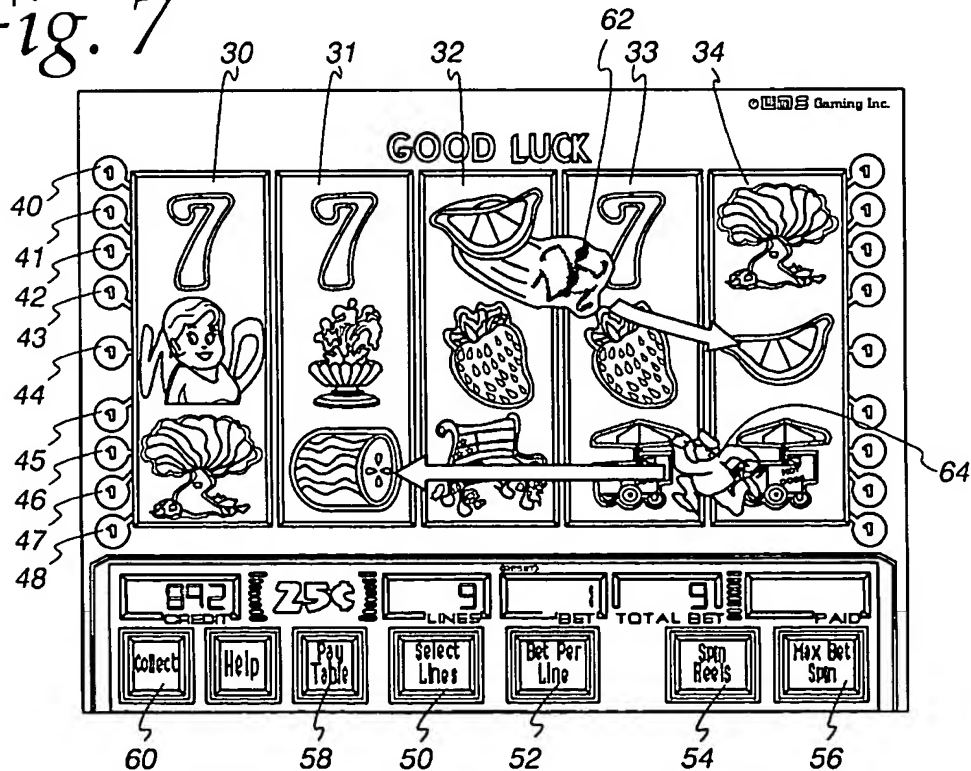


Fig. 8

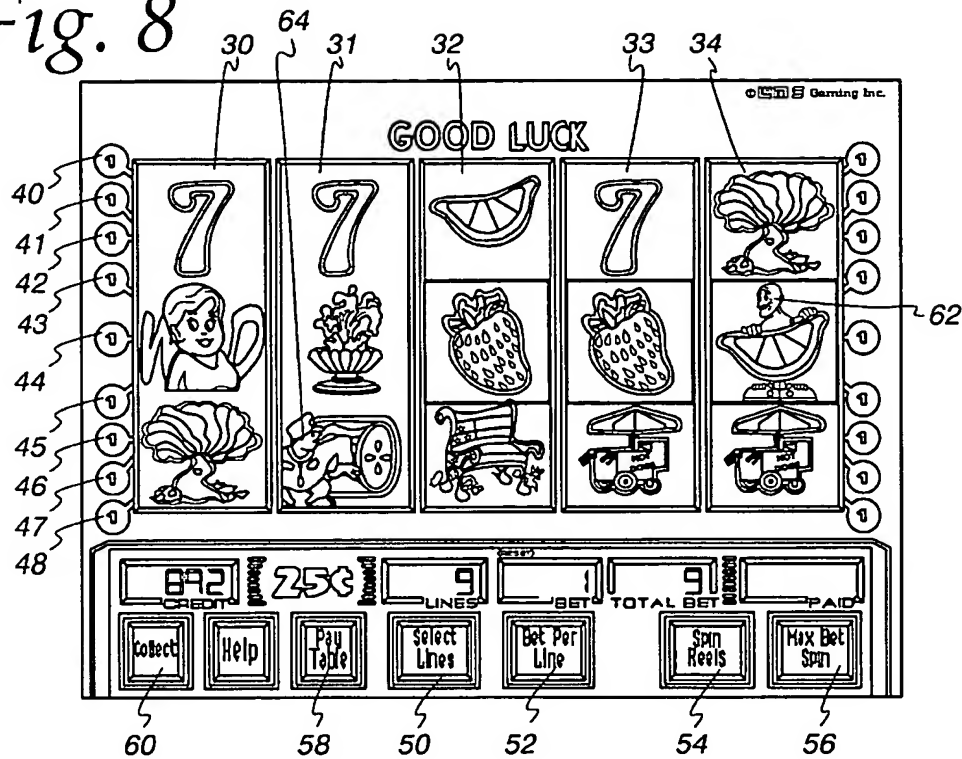


Fig. 9

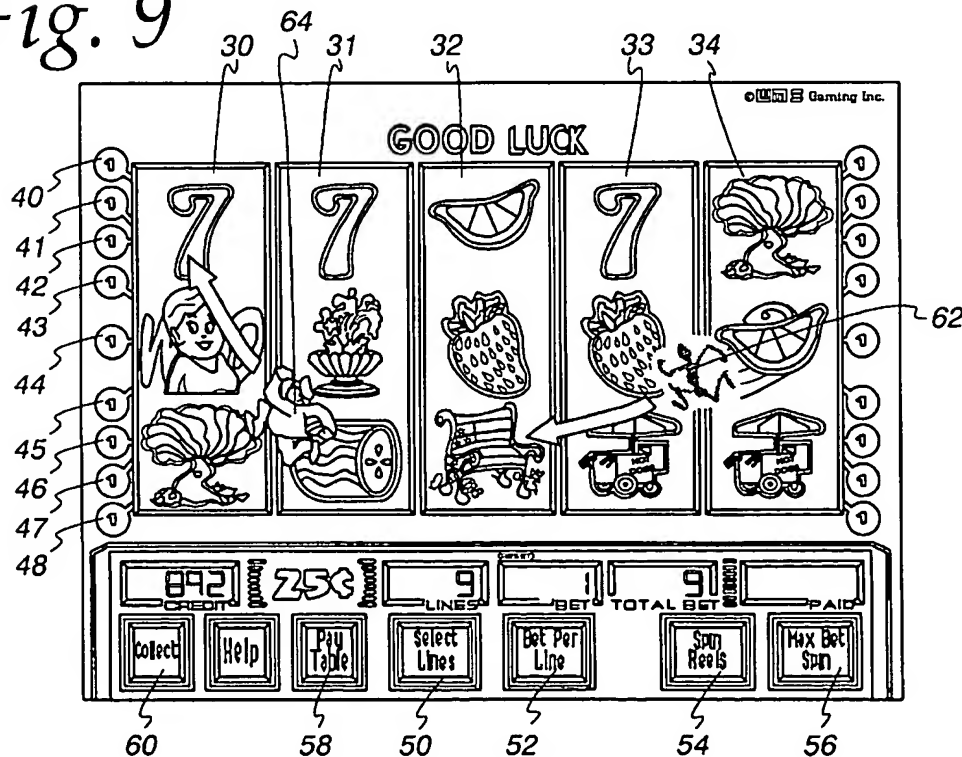


Fig. 10

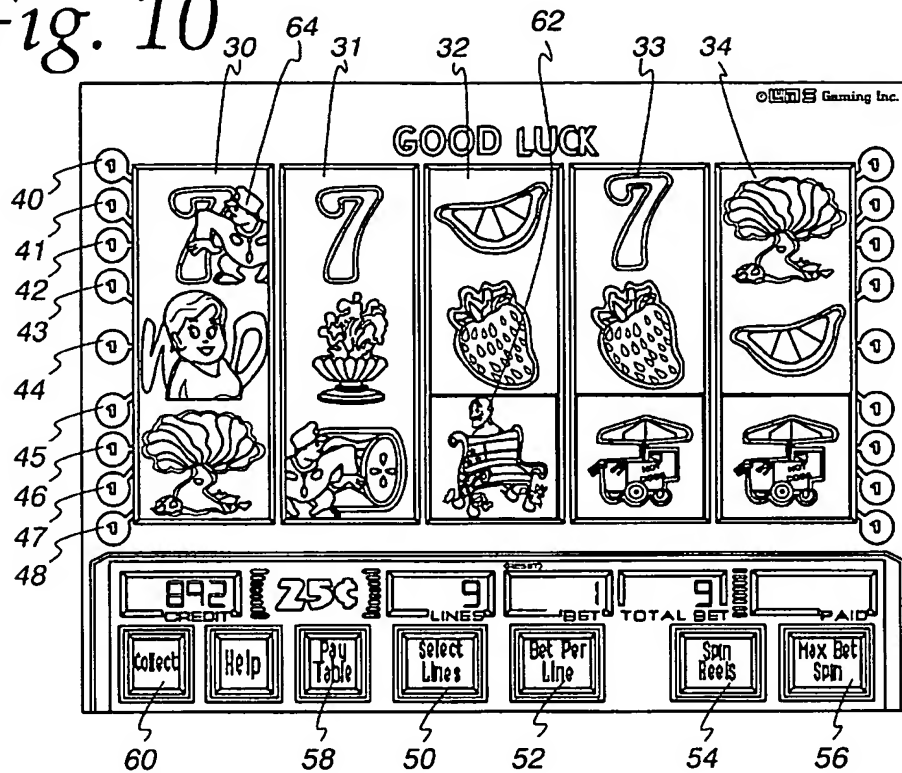


Fig. 11

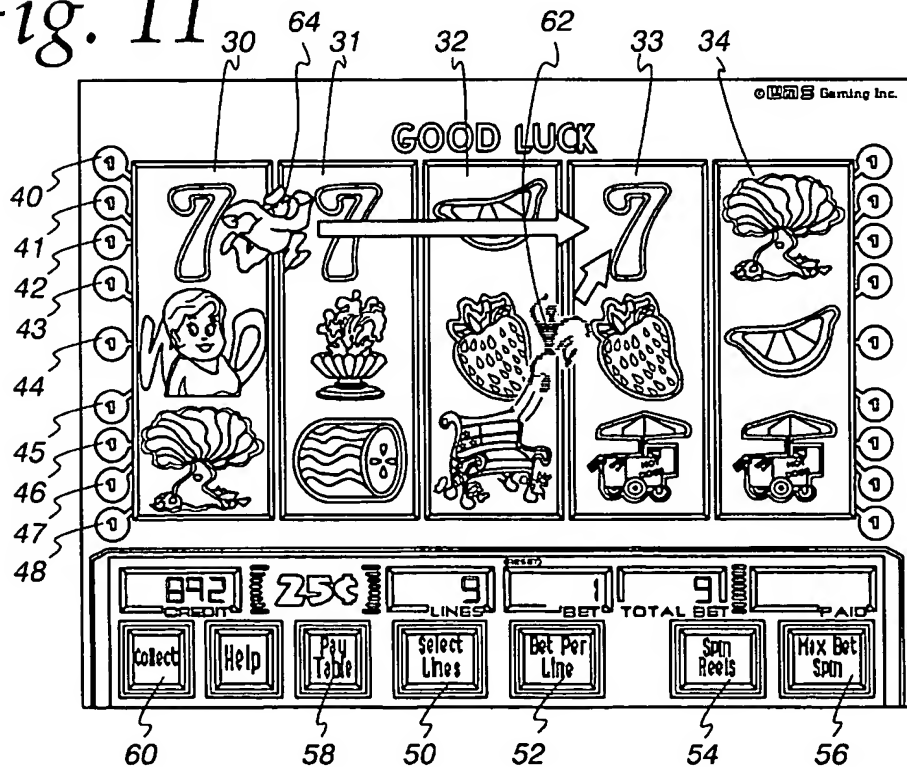


Fig. 12

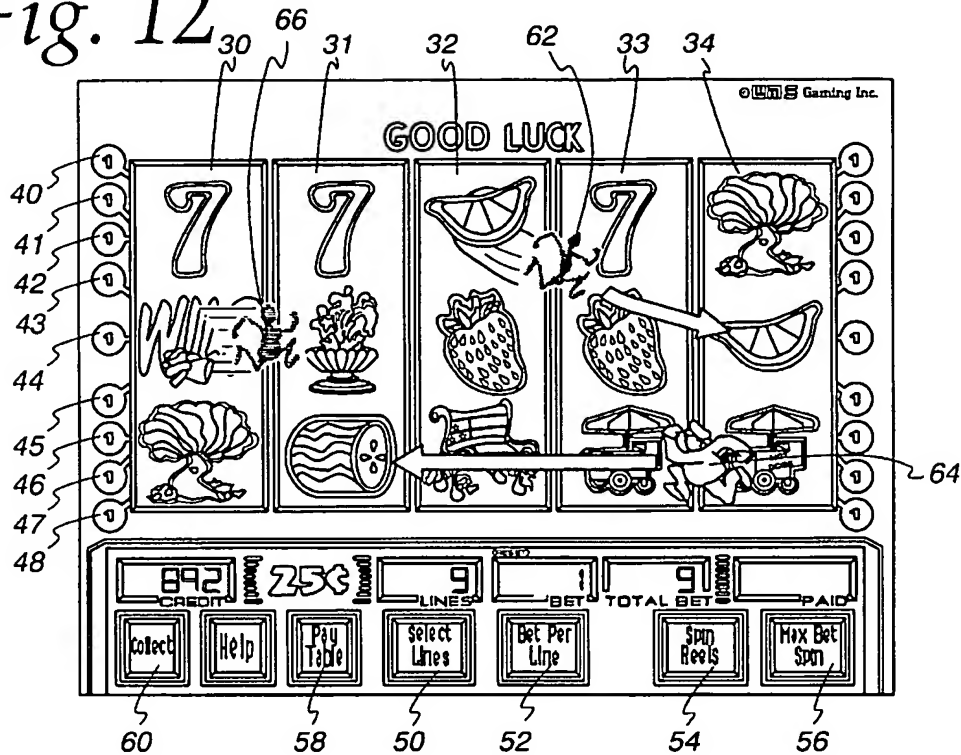
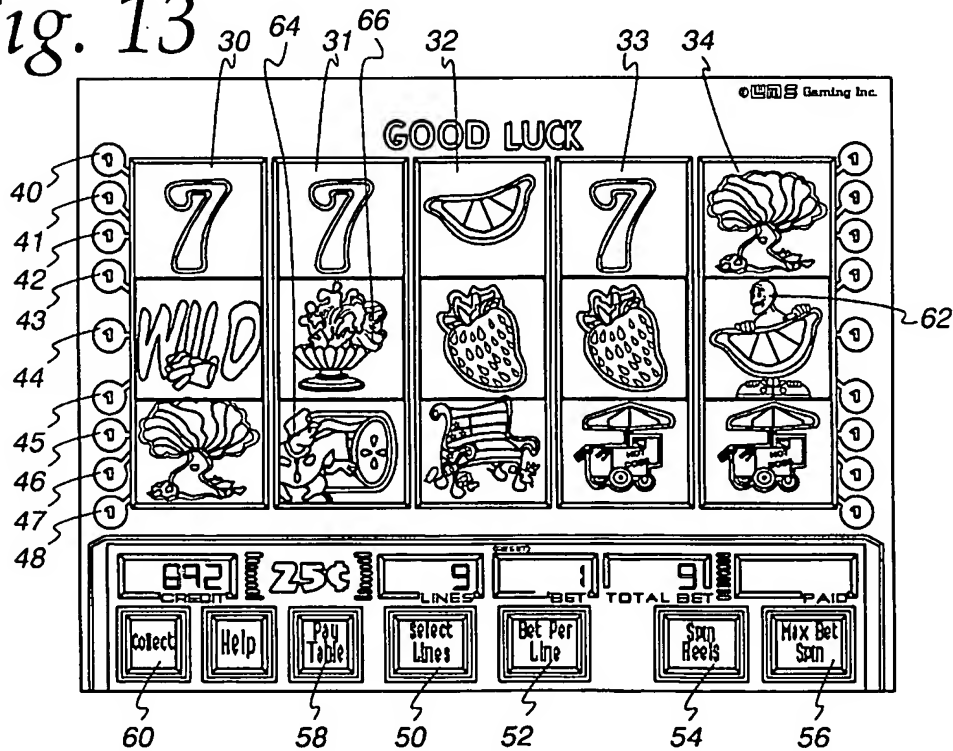


Fig. 13



GAMING MACHINE WITH MOVING SYMBOLS ON SYMBOL ARRAY

FIELD OF THE INVENTION

The present invention relates generally to gaming machines and, more particularly, to a gaming machine providing a game of chance in which a special symbol(s) moves around a symbol array shown on a visual display, the symbol array is evaluated for winning symbol combinations each time the special symbol(s) stops, and the game ends in response to the special symbol encountering a stop-bonus symbol that also moves around the symbol array.

BACKGROUND OF THE INVENTION

Gaming machines, such as slot machines, video poker machines and the like, have been a cornerstone of the gaming industry for several years. Generally, the popularity of such machines with players is dependent on the likelihood (or perceived likelihood) of winning money at the machine and the intrinsic entertainment value of the machine relative to other available gaming options. Where the available gaming options include a number of competing machines and the expectation of winning each machine is roughly the same (or believed to be the same), players are most likely to be attracted to the most entertaining and exciting of the machines. Shrewd operators consequently strive to employ the most entertaining and exciting machines available because such machines attract frequent play and hence increase profitability to the operator. Accordingly, in the competitive gaming machine industry, there is a continuing need for gaming machine manufacturers to produce new types of games, or enhancements to existing games, which will attract frequent play by enhancing the entertainment value and excitement associated with the game.

One concept that has been successfully employed to enhance the entertainment value of a game is the concept of a "secondary" or "bonus" game that may be played in conjunction with a "basic" game. The bonus game may comprise any type of game, either similar to or completely different from the basic game, which is entered upon the occurrence of a selected event or outcome of the basic game. Because the bonus game concept offers tremendous advantages in player appeal and excitement relative to other known games, and because such games are attractive to both players and operators, there is a continuing need to develop new features for bonus games to satisfy the demands of players and operators. Preferably, such new bonus game features will maintain, or even further enhance, the level of player excitement offered by bonus games heretofore known in the art. The present invention is directed to satisfying these needs.

SUMMARY OF THE INVENTION

A gaming machine comprises a visual display and a game of chance shown on the display. In connection with the game of chance, the visual display shows an array of symbols in visual association with at least one pay line. The array includes a special symbol and a stop-game symbol. The game of chance includes a plurality of game rounds. During each of the game rounds the special symbol and the stop-game symbol randomly move to and stop at new respective positions on the array. The game of chance awards a payout during the round if the symbols along the pay line correspond to a winning game outcome. The game of chance ends in response to the new respective positions on the array

during one of the game rounds being the same position. The array optionally includes a second special symbol that, during certain ones of the game rounds, also moves to and stops at a new position on the array. In determining whether to award a payout, the array positions containing the special symbols are preferably evaluated as wilds.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other advantages of the invention will become apparent upon reading the following detailed description and upon reference to the drawings in which:

FIG. 1 is a simplified front view of a gaming machine embodying the present invention;

FIG. 2 is a block diagram of a control system suitable for operating the gaming machine;

FIG. 3 is a display screen capture associated with a five-reel, nine-line basic game that is played on the gaming machine;

FIG. 4 is a display screen capture showing a start-bonus outcome in the basic game which triggers the bonus game; and

FIGS. 5 through 13 are display screen captures associated with the bonus game.

While the invention is susceptible to various modifications and alternative forms, specific embodiments have been shown by way of example in the drawings and will be described in detail herein. However, it should be understood that the invention is not intended to be limited to the particular forms disclosed. Rather, the invention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

DESCRIPTION OF SPECIFIC EMBODIMENTS

Turning now to the drawings and referring initially to FIG. 1, there is depicted a video gaming machine 10 that may be used to implement a bonus game according to the present invention. The gaming machine 10 includes a video display 12 that may comprise a dot matrix, CRT, LED, LCD, electro-luminescent display or generally any type of video display known in the art. In the illustrated embodiment, the gaming machine 10 is an "upright" version in which the video display 12 includes a touch screen and is oriented vertically relative to the player. It will be appreciated, however, that any of several other models of gaming machines are within the scope of the present invention including, for example, a "slant-top" version in which the video display is slanted at about a thirty-degree angle toward the player, or gaming machines that include mechanical rather than video displays.

In one embodiment, the gaming machine 10 is operable to play a game entitled WILD STREAK™ having city park theme symbols. The WILD STREAK™ game features a basic game in the form of a slot machine with five simulated spinning reels (see FIG. 3) and a bonus game with symbols that move around the reels after they have been stopped. It will be appreciated, however, that the gaming machine 10 may be implemented with games other than the WILD STREAK™ game and/or with any of several alternative game themes.

FIG. 2 is a block diagram of a control system suitable for operating the gaming machine 10. Coin/credit detector 14 signals a CPU 16 when a player has inserted a number of coins or played a number of credits. Then, the CPU 16 operates to execute a game program which causes the video

display 12 to display the basic game that includes simulated reels with symbols displayed thereon (see FIG. 3). The player may select the number of pay lines to play and the amount to wager via touch screen input keys 17. The basic game commences in response to the player activating a switch 18 (e.g., by pulling a lever or pushing a button), causing the CPU 16 to set the reels in motion, randomly select a game outcome and then stop the reels to display symbols corresponding to the pre-selected game outcome. In one embodiment, certain of the basic game outcomes cause the CPU 16 to enter a bonus mode causing the video display 12 to show a bonus game. The display screens associated with the WILD STREAK™ bonus game will be described in detail in relation to FIGS. 6 through 12.

A system memory 20 stores control software, operational instructions and data associated with the gaming machine 10. In one embodiment, the memory 20 comprises a separate read-only memory (ROM) and battery-backed random-access memory (RAM). However, it will be appreciated that the system memory 20 may be implemented on any of several alternative types of memory structures or may be implemented on a single memory structure. A payoff mechanism 22 is operable in response to instructions from the CPU 16 to award a payoff of coins or credits to the player in response to certain winning outcomes which might occur in the basic game or bonus game. The payoff amounts corresponding to certain combinations of symbols in the basic game is predetermined according to a pay table stored in system memory 20. The payoff amounts corresponding to certain outcomes of the bonus game are also stored in system memory 20.

As shown in FIG. 3, the WILD STREAK™ basic game is implemented on the video display 12 on five video simulated spinning reels 30, 31, 32, 33 and 34 (hereinafter "reels") with nine pay lines 40-48. Each of the pay lines 40-48 extends through one symbol on each of the five reels 30-34. Generally, game play is initiated by inserting a number of coins or playing a number of credits, causing the CPU 16 (FIG. 2) to activate a number of pay lines corresponding to the number of coins or credits played. In one embodiment, the player selects the number of pay lines (between one and nine) to play by pressing a "Select Lines" key 50 on the video display 12. The player then chooses the number of coins or credits to bet on the selected pay lines by pressing the "Bet Per Line" key 52.

After activation of the pay lines, the reels 30-34 may be set in motion by touching the "Spin Reels" key 54 or, if the player wishes to bet the maximum amount per line, by using the "Max Bet Spin" key 56 on the video display 12. Alternatively, other mechanisms such as, for example, a lever or push button may be used to set the reels in motion. The CPU 16 uses a random number generator to select a game outcome (e.g., "basic" game outcome) corresponding to a particular set of reel "stop positions." The CPU 16 then causes each of the video reels 30-34 to stop at the appropriate stop position. Video symbols are displayed on the reels 30-34 to graphically illustrate the reel stop positions and indicate whether the stop positions of the reels represent a winning game outcome. Winning basic game outcomes (e.g., symbol combinations resulting in payment of coins or credits) are identifiable to the player by a pay table. In one embodiment, the pay table is affixed to the machine 10 and/or displayed by the video display 12 in response to a command by the player (e.g., by pressing the "Pay Table" button 58). A winning basic game outcome occurs when the symbols appearing on the reels 30-34 along an active pay line correspond to one of the winning combinations on the

pay table. If the displayed symbols stop in a winning combination, the game credits the player an amount corresponding to the award in the pay table for that combination multiplied by the amount of credits bet on the winning pay line. The player may collect the amount of accumulated credits by pressing the "Collect" button 60.

An example of a pay table for the WILD STREAK™ basic and bonus games is shown below:

WIN COMBINATIONS					PAY
Seven	Seven	Seven	Seven	Seven	5000
Seven	Seven	Seven	Seven		500
Seven	Seven	Seven			100
Seven	Seven				5
Fountain	Fountain	Fountain	Fountain	Fountain	800
Fountain	Fountain	Fountain	Fountain		125
Fountain	Fountain	Fountain			25
Fountain	Fountain				5
Stand	Stand	Stand	Stand	Stand	700
Stand	Stand	Stand	Stand		100
Stand	Stand	Stand			30
Bench	Bench	Bench	Bench	Bench	500
Bench	Bench	Bench	Bench		80
Bench	Bench	Bench			15
Can	Can	Can	Can	Can	400
Can	Can	Can	Can		70
Can	Can	Can			12
Melon	Melon	Melon	Melon	Melon	200
Melon	Melon	Melon	Melon		60
Melon	Melon	Melon			10
Orange	Orange	Orange	Orange	Orange	150
Orange	Orange	Orange	Orange		30
Orange	Orange	Orange			7
Strawberry	Strawberry	Strawberry	Strawberry	Strawberry	100
Strawberry	Strawberry	Strawberry	Strawberry		20
Strawberry	Strawberry	Strawberry			7
Tree	Tree	Tree	Tree	Tree	50
Tree	Tree	Tree	Tree		10
Tree	Tree	Tree			2

The pay table enables the player to view the winning combinations and their associated payoff amounts. From the pay table it can be seen that the following reel symbols that can lead to a payoff in the basic and bonus games: SEVEN, FOUNTAIN, HOT DOG STAND, BENCH, CAN, MELON, ORANGE, STRAWBERRY, and TREE. In the preferred implementation, the winning combinations start from either the first reel 30 (left to right) or the fifth reel 34 (right to left) and span adjacent reels.

Included among the plurality of basic game outcomes are a plurality of different start-bonus outcomes for starting play of a bonus game. A start-bonus outcome may be defined in any number of ways. For example, a start-bonus outcome occurs when a special start-bonus symbol or a special combination of symbols appears on one or more of the reels 30-34 in any predetermined display position. The appearance of a start-bonus outcome causes the processor to shift operation from the basic game to a bonus game.

The WILD STREAK™ bonus game is triggered by the combination of a primary stalker symbol/character on the first reel 30 and the word "Streak" superimposed over any of the symbols on the fifth reel 34. In one embodiment, there are two primary stalker symbols: OLD MAN STALKER and YOUNG GUY STALKER. Therefore, the combination of either of these two primary stalker symbols on the first reel 30 and the word "Streak" superimposed over any of the symbols on the fifth reel 34 triggers the bonus game.

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FIG. 4 shows an example of a start-bonus outcome in which the OLD MAN STREAKER symbol 62 appears on the first reel 30 and the word "Streak" is superimposed over the ORANGE symbol on the fifth reel 34. In the illustrated embodiment, the OLD MAN STREAKER and YOUNG GUY STREAKER symbols do not appear in the pay table and, therefore, cannot generate a winning basic game outcome. These symbols, however, do provide start-bonus outcomes for triggering the WILD STREAK™ bonus game and serve as wild symbols when evaluating outcomes of the bonus game.

The reels 30-34 remain stopped throughout the WILD STREAK™ bonus game. However, the primary stalker symbol 62 and a stop-bonus POLICEMAN symbol 64 randomly move around the symbol array formed by the stopped reels 30-34. During a first bonus round shown in FIGS. 5 and 6, the primary stalker symbol 62 moves or "runs" from its original position on the first reel 30 to a new position on the symbol array. The stalker stops at this new position and hides behind the reel symbol (e.g., ORANGE symbol) already present at that position. The CPU then evaluates the symbol array for any winning combinations along an active pay line that contain the primary stalker symbol 62 in the combination. The array position containing the primary stalker symbol 62 and the original position of the stalker symbol on the reel 30 serve as wilds during this evaluation. The winning combinations for the bonus game are defined by the pay table above or, alternatively, by a different pay table applicable only to the bonus game. In the example shown in FIG. 6, the primary stalker symbol 62 generates the winning combination SEVEN, SEVEN, SEVEN, SEVEN along the pay line 42, where the third SEVEN results from the ORANGE symbol being evaluated as a wild due to the primary stalker symbol 62. According to the pay table, this winning combination generates a bonus game payout of 500 coins multiplied by the line bet if the pay line 42 is active.

After the first bonus round, the stop-bonus POLICEMAN symbol 64 appears in one of the symbol positions of the fifth reel 34 as shown in FIG. 6. The POLICEMAN symbol 64 always avoids the primary stalker symbol 62 when first appearing on the symbol array.

During each subsequent bonus round, the CPU randomly selects a destination position for the primary stalker symbol 62 and then randomly selects a destination position for POLICEMAN symbol 64 from among the remaining array positions. The stalker stops at its destination position and hides behind the reel symbol already present at that position. The CPU then evaluates the symbol array for any winning combinations along an active pay line that contain the primary stalker symbol 62 in the combination. The array position containing the primary stalker symbol 62 and the original position of the stalker symbol on the reel 30 serve as wilds during this evaluation. In the example shown in FIGS. 7 and 8, the primary stalker symbol 62 generates the winning combination STRAWBERRY, STRAWBERRY, STRAWBERRY along the pay line 44, where the third STRAWBERRY results from the ORANGE symbol being evaluated as a wild due to the primary stalker symbol 62. According to the pay table, this winning combination generates a bonus game payout of 7 coins multiplied by the line bet if the pay line 44 is active. In the example shown in FIGS. 9 and 10, the primary stalker symbol 62 generates the winning combination HOT DOG STAND, HOT DOG STAND, HOT DOG STAND along the pay line 46, where the first HOT DOG STAND results from the BENCH symbol being evaluated as a wild due to the primary stalker

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symbol 62. According to the pay table, this winning combination generates a bonus game payout of 30 coins multiplied by the line bet if the pay line 46 is active.

The bonus game ends when the number of bonus rounds reaches a predetermined count, at which time the CPU selects the destination position for the POLICEMAN symbol 64 to be the same as the destination position of the primary stalker symbol 62 (i.e., the POLICEMAN symbol catches the stalker symbol). In the example shown in FIG. 11, both the primary stalker symbol 62 and the POLICEMAN symbol 64 are moving to the upper position of the fourth reel 33.

Referring back to FIG. 6, in one embodiment a secondary stalker symbol 66 accompanies the primary stalker symbol 62. The secondary stalker symbol 66 appears on the reel 30 where the primary stalker symbol 62 originally started. Generally, the secondary stalker symbol 66 remains in this original position as a bystander as the primary stalker symbol 62 and the POLICEMAN symbol 64 "streak" around the symbol array.

On some bonus rounds, however, the secondary stalker symbol 66 may remove her clothes and join the primary stalker symbol 62 in "streaking" around the symbol array. The pile of clothes is left in here place. This "double streaking" situation is shown in FIGS. 12 and 13. The two stalkers stop at their new positions and hide behind the reel symbols already present at those positions. The CPU then evaluates the symbol array for any winning combinations along an active pay line that contain either stalker 62 or 66 in the combination. The two array positions containing the respective primary and secondary stalker symbols 62 and 66, as well as the original position of the stalker symbols on the reel 30, serve as wilds during this evaluation, resulting in a total of three wilds. In the example shown in FIG. 13, the primary and secondary stalker symbols 62 and 66 generate the winning combination STRAWBERRY, STRAWBERRY, STRAWBERRY, STRAWBERRY, and STRAWBERRY along the pay line 44, where (a) the first STRAWBERRY results from the wild symbol on the first reel 30, (b) the second STRAWBERRY results from the secondary stalker symbol 66, and (c) the fifth STRAWBERRY results from the ORANGE symbol being evaluated as a wild due to the primary stalker symbol 62. According to the pay table, this winning combination generates a bonus game payout of 100 coins multiplied by the line bet if the pay line 44 is active. The bonus game ends when either the primary stalker symbol 62 or the secondary stalker symbol 66 is "caught" by the POLICEMAN symbol 64.

While the present invention has been described with reference to one or more particular embodiments, those skilled in the art will recognize that many changes may be made thereto without departing from the spirit and scope of the present invention. For example, the basic game need not comprise a spinning reel slot machine game as illustrated in FIG. 1, but may comprise virtually any type of game of chance or skill or combination of games having outcomes (e.g., start-bonus outcomes) that trigger play of a bonus game on the video display 12. For example, the basic game may comprise a video poker or video blackjack game. The basic game may itself be implemented on the video display 12 or a separate video display. In embodiments where both the basic and bonus games are implemented in video, each game may be shown on the same video display 12. In an alternative embodiment, the WILD STREAK™ bonus game may be implemented as a stand-alone basic game that is not triggered by a start-bonus outcome on spinning reels. Each

of these embodiments and obvious variations thereof is contemplated as falling within the spirit and scope of the claimed invention, which is set forth in the following claims.

What is claimed is:

1. A slot machine comprising:

a visual display showing an array of symbols;

a basic game controlled by a processor in response to a wager amount, wherein in the basic game the array provides rotatable reels that are rotated and stopped to place the symbols of each reel in visual association with at least one pay line, the basic game awarding a basic game payout if the symbols along the pay line correspond to a winning basic game outcome, the basic game having a start-bonus outcome; and

a bonus game activated by the processor in response to the start-bonus outcome, the bonus game including a plurality of bonus rounds, the array including a special symbol and a stop-bonus symbol during the bonus game, wherein during each of the bonus rounds the special symbol and the stop-bonus symbol move to and stop at new respective positions on the array, the bonus game awarding a bonus round payout during the bonus round if the symbols along the pay line correspond to a winning bonus game outcome, the bonus game ending in response to the new respective positions of the special symbol and the stop-bonus symbol on the array during one of the bonus rounds being the same position.

2. The slot machine of claim 1 wherein the visual display is a video display.

3. The slot machine of claim 1, wherein the start-bonus outcome includes (a) the special symbol appearing on a first of the stopped rotatable reels during the basic game, and (b) the start-bonus symbol superimposed on any of the symbols appearing a last of the stopped rotatable reels during the basic game.

4. The slot machine of claim 1, wherein the special symbol is wild such that the bonus game awards the bonus round payout with the special symbol evaluated as a wild.

5. The slot machine of claim 1, wherein an original position of the special symbol on the array at a beginning of the bonus game remains wild throughout the bonus game.

6. The slot machine of claim 1, wherein in the bonus game the array includes a second special symbol that, during certain ones of the bonus rounds, also moves to and stops at a new position on the array.

7. The slot machine of claim 6, wherein the second special symbol is wild such that the bonus game awards the bonus round payout with the second special symbol evaluated as a wild.

8. The slot machine of claim 1, wherein during each of the bonus rounds the special symbol and the stop-bonus symbol randomly move to and stop at the new respective positions on the array.

9. The slot machine of claim 1, wherein the winning bonus game outcome includes the special symbol along the pay line.

10. A gaming machine comprising:

a visual display showing an array of symbols in visual association with at least one pay line, the array including a special symbol and a stop-game symbol; and

a game of chance including a plurality of game rounds, wherein during each of the game rounds the special symbol and the stop-game symbol move to and stop at new respective positions on the array, the game of chance awarding a payout during the round if the symbols along the pay line correspond to a winning

game outcome, the game of chance ending in response to the new respective positions of the special symbol and the stop-bonus symbol on the array during one of the game rounds being the same position.

11. The gaming machine of claim 10, wherein the special symbol is wild such that the game of chance awards the payout with the special symbol evaluated as a wild.

12. The gaming machine of claim 10, wherein an original position of the special symbol on the array at a beginning of the game of chance remains wild throughout the game of chance.

13. The gaming machine of claim 10, wherein the array includes a second special symbol that, during certain ones of the game rounds, also moves to and stops at a new position on the array.

14. The gaming machine of claim 13, wherein the second special symbol is wild such that the game of chance awards the payout with the second special symbol evaluated as a wild.

15. The gaming machine of claim 10, wherein during each of the game rounds the special symbol and the stop-game symbol randomly move to and stop at the new respective positions on the array.

16. The gaming machine of claim 10, wherein the winning game outcome includes the special symbol along the pay line.

17. A gaming machine comprising:

a visual display showing an array of symbols in visual association with at least one pay line, the array including first and second wild symbols; and

a game of chance including a plurality of game rounds, wherein during certain ones of the game rounds the first and second wild symbols move to and stop at new respective positions on the array, the game of chance awarding a payout during the round if the symbols along the pay line correspond to a winning game outcome, the game of chance evaluating the first and second wild symbols as wilds in determining whether or not to award the payout.

18. The gaming machine of claim 17, wherein original positions of the respective first and second wild symbols on the array at a beginning of the game of chance remains wild throughout the game of chance.

19. The gaming machine of claim 18, wherein the original positions of the respective first and second wild symbols are the same position.

20. The gaming machine of claim 17, further including a basic game controlled by a processor in response to a wager amount, wherein in the basic game the array provides rotatable reels that are rotated and stopped to place the symbols of each reel in visual association with the pay line, the basic game awarding a basic game payout if the symbols along the pay line correspond to a winning basic game outcome, the basic game having a start-bonus outcome, and wherein the game of chance is a bonus game activated by the processor in response to the start-bonus outcome.

21. The gaming machine of claim 17, wherein the winning game outcome includes at least one of the first and second wild symbols along the pay line.

22. A method of operating a slot machine under control of a processor comprising:

a) providing a basic game including a plurality of rotatable reels shown on a visual display, the plurality of reels forming an array of symbols;

b) in response to a wager amount, rotating and stopping the reels to place the symbols of each reel in visual association with at least one pay line;

- c) awarding a basic game payout if the symbols along the pay line correspond to a winning basic game outcome;
 - d) providing a bonus game in response to a start-bonus outcome in the basic game, the array including a special symbol and a stop-bonus symbol during the bonus game;
 - e) moving the special symbol and the stop-bonus symbol to new respective positions on the array;
 - f) awarding a bonus payout if the symbols along the pay line correspond to a winning bonus game outcome; and
 - g) repeating steps (e) and (f) until the new respective positions on the array are the same position.
23. The method of claim 22, wherein step (f) includes evaluating the special symbol as a wild.
24. The method of claim 22, wherein the array in the bonus game includes a second special symbol, and wherein step (e) includes sometimes moving the second special symbol to a new position on the array.
25. The method of claim 24, wherein step (f) includes evaluating the second special symbol as a wild.
26. The method of claim 22, wherein step (e) includes randomly moving the special symbol and the stop-bonus symbol to the new respective positions on the array.
27. The method of claim 22, wherein the winning bonus game outcome includes the special symbol along the pay line.
28. A method of operating a gaming machine under control of a processor comprising:
- a) providing a game of chance including an array of symbols shown on a visual display in visual association with at least one pay line, the array including a special symbol and a stop-game symbol;
 - b) moving the special symbol and the stop-bonus symbol to new respective positions on the array;
 - c) awarding a payout if the symbols along the pay line correspond to a winning game outcome; and
 - d) repeating steps (b) and (c) until the new respective positions on the array are the same position.
29. The method of claim 28, wherein step (c) includes evaluating the special symbol as a wild.
30. The method of claim 28, wherein the array includes a second special symbol, and wherein step (b) includes sometimes moving the second special symbol to a new position on the array.
31. The method of claim 30, wherein step (c) includes evaluating the second special symbol as a wild.

32. The method of claim 28, wherein step (b) includes randomly moving the special symbol and the stop-bonus symbol to the new respective positions on the array.
33. The method of claim 28, wherein the winning game outcome includes the special symbol along the pay line.
34. A method of operating a gaming machine under control of a processor comprising:
- a) providing a game of chance including an array of symbols shown on a visual display in visual association with at least one pay line, the array including first and second wild symbols;
 - b) moving the first and second wild symbols to new respective positions on the array;
 - c) awarding a payout if the symbols along the pay line correspond to a winning game outcome, the first and second wild symbols being evaluated as wilds in determining whether or not to award the payout; and
 - d) repeating steps (b) and (c) until a predetermined event occurs in the game of chance.
35. The method of claim 34, wherein original positions of the respective first and second wild symbols on the array at a beginning of the game of chance remains wild throughout the game of chance.
36. The method of claim 35, wherein the original positions of the respective first and second wild symbols are the same position.
37. The method of claim 34, further including:
- providing a basic game including a plurality of rotatable reels shown on the visual display, the plurality of reels forming the array of symbols;
 - in response to a wager amount, rotating and stopping the reels to place the symbols of each reel in visual association with the pay line; and
 - awarding a basic game payout if the symbols along the pay line correspond to a winning basic game outcome; and
 - wherein step (a) occurs in response to a start-bonus outcome in the basic game, the game of chance being a bonus game.
38. The method of claim 34, wherein the winning game outcome includes at least one of the first and second wild symbols along the pay line.

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,517,432 B1
DATED : February 11, 2003
INVENTOR(S) : Jaffe

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [56], U.S. PATENT DOCUMENTS, "6,261,417" reference, delete
"6,261,417" and insert -- 6,261,177 --

Signed and Sealed this

Twenty-ninth Day of July, 2003

A handwritten signature in black ink, appearing to read "James E. Rogan", with a horizontal line drawn underneath it.

JAMES E. ROGAN
Director of the United States Patent and Trademark Office